6. Cocom General List Review

52

CONFIDENTIAL

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Date: October 1 1959

COORDINATING COMMITTEE

MEMORANDUM FROM THE UNITED STATES DELEGATION

Concerning

PROPOSALS FOR THE 1959 LIST REVIEW

The United States Delegation submits for the consideration of the Committee the following proposals, accompanied by brief explanatory statements:

REDEFINITIONS (Changes Underlined)

1075 - Spinning Lathes

Redefine to read:

Spin-forming machines, except those with a spindle drive motor of 25 h.p. or less.

The proposed change in nomenclature reflects the United States belief that it is the intent of this definition to include within the embargo machines that form hot or cold metal through spinning action or rotary motion. Machines have been developed that fall within the understood intent of this definition and that embody unique technological know-how but that cannot properly be termed lathes. The horse power cut-off in the definition will ensure that the coverage will be limited to machines used for direct military purposes, such as forming nose cones and missile and rocket components.

1081 - Machinery for manufacture of aircraft

Redefine to read:

Machinery for use in the manufacture of aircraft, rockets, and missiles, as follows:

(a) Machinery specially designed for the working or forming of sheet, plate or extrusions for aircraft, rockets, and missiles.

(b) Machinery specially designed for skin milling for aircraft, rockets and missiles.

The proposed revision represents a logical up-dating of the definition to ensure that machinery designed for manufacture of the most modern weapons is not inadvertently excluded from embargo.

1133 - Valves, cocks and pressure regulators

Redefine heading of part (b) to read:

(b) Having all flow contact surfaces made of any of the following materials:

The proposed revision is designed to bring this definition into line with Item 1131 and with the interpretation some member governments are understood to be using.

1142 - Pipe and tubing

Redefine to read:

Pipe and tubing made of, lined with or covered with polytetrafluoroethylene or polytrifluorochloroethylene.

The proposed revision is a primarily technical change, in accordance with the understood intent of the item, designed to ensure the embargo of internal piping used in heat exchangers where highly corrosive chemicals flow around protected components.

1145 - Containers

Redefine to read:

Containers, jacketed only, for the storage or transportation of liquefied gases, including mobile units, of 250 gallons (946 litres) capacity or over, designed for liquid nitrogen, oxygen, hydrogen, ozone, helium, argon and fluorine.

The proposed revisions are designed to cover smaller mobile containers coming into increasing military use in the United States and containers resistant to the highly corrosive action of fluorine, which is rapidly becoming of paramount importance in the missile field.

1485 - Compasses and gyroscopic equipment

Redefine parts (e) and (h) to read:

(e) Gyro-magnetic and gyro-astro compasses, except those which are of types and series having been in normal civil use for more than two years and which are the standard equipment of and exported with aircraft excluded from control under Item 1460.

(h) Gyroscopes and accelerometers of very high precision and miniturized gyroscopes and accelerometers which are designed for use in inertia navigation systems or in guidance systems of all types;

Item 1485(e): The proposed addition of gyro-astro compasses is designed to embargo the latest developments in navigation systems that embody unique technology of direct and critical military application.

Item 1485(h): The proposed addition of high-precision accelerometers is designed to clarify the intent of the present definition, which is believed to be to embargo the principal components of inertial navigation and guidance systems.

1501 - Communication, navigation, direction finding and radar equipment

Under part (a), revise NOTE, part (6), to read:

(6) Rated for operation over a range of ambient temperatures extending from below -40°C. to above +55°C.

Redefine parts (d) and (d)(2) to read:

(d) Ground, marine radar and direction-finding equipment, as follows:

(d)(2) Radar equipment incorporating permanent Echo Cancellation facilities and/or aerials employing multiple polarization.

Item 1501, Part (a) - NOTE, part (6): The proposed change in temperature figures reflects the fact that equipment for commercial air carrier use is designed for temperatures not exceeding the range between the proposed temperature figures. Equipment rated for operation beyond this range is of primarily military use.

Item 1501(d): The proposed addition of "direction-finding" equipment is designed to make it clear that ground direction-finding equipment is embargoed even though it is not properly designated a radar instrument.

Item 1501(d)(2): "Multiple" polarization includes the "circular" polarization cited in the existing definition as well as other kinds of diversity polarization of possible greater significance.

1502 - Communications and detection equipment using infra-red

Redefine to read:

Communication, detection and tracking equipment of a kind using infra-red radiation or ultrasonic waves; and specialized parts therefor.

The addition of the phrase "and tracking" reflects the fact that one of the most important applications of infra-red equipment is in homing devices such as those employed in certain heat-seeking missiles. This application might not be covered by the term "detection", but the addition of the word "tracking" would ensure its embargo, consistent with the United States understanding of the intent of the definition.

1514 - Pulse modulators

Redefine to read:

> Pulse modulators capable of providing electric impulses of peak power exceeding 150 KW or of a duration of less than 1/10 microsecond, or with a duty cycle in excess of 0.002; and pulse transformer and pulse-forming equipment, and delay lines being specialized parts of such modulators.

The proposed addition of a duty cycle cut-off is designed to protect technology contained in certain new military radar. Most conventional radar employs a duty cycle much shorter than 0.002.

1517 - Radio Transmitters

Redefine part (b)(4) to read:

> (b)(4) Rated for operation over a range of ambient temperatures extending from below -40°C. to above +55°C.

See explanation of proposed revision of NOTE, part (6), to Item 1501, part (a).

1518 - Telemetering and telecontrol equipment

Redefine to read:

> Telemetering and telecontrol equipment suitable for use with aircraft (piloted or pilotless), space vehicles and weapons (guided or unguided).

The proposed addition of "space vehicles" is designed to modernize the definition in light of latest technological developments.

1529 - Electronic instruments

Add new part (c) to read:

> (c) Those operating over a range of ambient temperatures extending from below -20°C. to above +55°C.

The additional specifications proposed here are designed to embargo instruments which, because of their ability to withstand extreme temperature variations, are primarily of military application.

1537 - Electromagnetic waveguides

Redefinition to be submitted.

1541 - Cathode-ray tubes

Redefine to read:

Cathode-ray tubes, as follows:

(a) Specially designed or in use for radar and/or counter measure equipment covered by Items 1501 and 1507;

(b) With writing speeds of more than 3,000 kilometers per second;

(c) With 3 or more electron guns, except 3-gun color television tubes designed for entertainment use;

(d) Alpha-numeric and similar data or information display tubes.

Item 1541(a): The proposed change is a logical extension of the intent of this item and of Item 1507, and will ensure the embargo of special cathode ray tubes developed for "counter-measure" purposes.

Item 1541(c): Self-explanatory partial deletion.

Item 1541(d): This proposed addition is designed to cover tubes used for display purposes in air warning systems, and/embody advanced technology the Bloc is not believed to possess. which

1545 - Transistors

Redefine part (b)(2) to read:

(b)(2) Designed to have a collector dissipation in excess of 100 milliwatts at median alpha cut-off frequencies greater than 500 kilocycles or minimum alpha cut-off frequencies greater than 200 kilocycles per second;

The proposed revision is a clarification offered toward the objective of ensuring uniform application of the definition.

1558 - Valves (tubes) electronic

Travelling wave tubes, part (h) seem to be embargoed under part (b) of this item. If it is understood that travelling wave tubes are embargoed under part (b), the United States could agree to the deletion of part (h).

1566 -Equipment to produce electronic assemblies

Add new part (c) to read:

(c) by automatically or semi-automatically assembling, wiring and/or packaging mounted modular insulated panels (including wafers) referred to in (a) and (b) above.

The proposed addition is designed to ensure the embargo of the most modern equipment for assembling modular insulated panels cited in the existing definition.

1568 - Control equipment

Add new part (h) to read:

(h) Analogue-to-digital and digital-to-analogue types of converters.

The proposed addition would ensure embargo of important devices necessary for the preparation of information for telemetering and fire control purposes.

27th October, 1959.

CORRIGENDUM to COCOM Document No. 3700.5

Page 6 - Item 1668, Tungsten wire.

Sub-item (c): The figure of 660 microns in the second line of this sub-item should be deleted and replaced by "600" microns.

DELETIONS

1042 - Right angle (T) lathes

It is questionable whether this item meets the criteria, and in any event there are more modern and efficient methods of achieving its purposes.

1549 - Photomultiplier tubes

The United States has been unable to identify any tubes meeting all of the tests of this definition.

NEW ITEMS

100 Category

Electric vacuum furnaces

Electric vacuum furnaces as follows:

(a) Consumable electrode vacuum arc furnaces;
(b) Skull type vacuum arc furnaces;
(c) Electron beam vacuum furnaces.

These furnaces represent new developments, embodying advanced technology, for the treatment of refractory metals having little use in non-military applications.

Ion vacuum pumps

Ion vacuum pumps (that is, those using the principle of ionization) and specially fabricated parts and accessories, n.e.s.

These pumps embody a new technique permitting the attainment of extremely high vacuums essential for research in terms of the most modern military applications.

200 Category

Electron beam welders

Electron beam welders and specially designed components.

These welders are used in working with the refractory metals produced in electric vacuum furnaces proposed for embargo.

500 Category

Electronic equipment and components

Electronic equipment and components, n.e.s. the following:

(a) Assemblies and sub-assemblies with a component density greater than 50 (100) parts per cubic inch (_____ parts per cubic centimeter), and equipment containing and such assembly or sub-assembly.

(b) Modular insulator panels (including wafers) mounting single or multiple electronic elements and specialized parts therefor.

This proposal is designed to embargo micro-modular electronic components. The micro-modular technique is a very recent development embodying technological know-how not available to the Bloc. The reduction in size and weight achieved through this technique is of primary importance in the most advanced aircraft, missile, rocket, and space vehicle designs. The proposed component density cut-off ensures that only the latest and most significant equipment and components would be embargoed.

Thermal detecting cells

Thermal detecting cells, radiant energy types only, with a response time constant of 10 milli-seconds or less measured at the operating temperature of the cell for which the time constant reaches a minimum.

These cells have their peak sensitivity in the deep infra-red radiant energy portion of the spectrum, and find their primary application in military infra-red devices.

WATCH LIST

Molybdenum, n.e.s.

Molybdenum alloys n.e.s., ores, concentrates, oxides and scrap.

Because of the apparent imminence of technological break-through in molybdenum metallurgy which will permit the use of molybdenum in extremely high temperature operations (e.g. nose cone coating), the United States considers it desirable to maintain surveillance over molybdenum source metals.